

**GUJARAT ELECTRICITY REGULATORY COMMISSION**  
Ahmedabad

**In the matter of determination of Transmission Charge, Wheeling Charge and Cross Subsidy Surcharge under Intra State Open Access**

**ORDER**

Date: February 28, 2006

1. In exercise of the powers conferred on it by Section 181 read with Sections 39(2)(d), 40(c), 42 (2)(3)(4), 86(1)(c) of the Electricity Act, 2003 (36 of 2003) and Section 20 (3)(b) of the Gujarat Electricity Industry (Reorganisation and Regulation) Act, 2003 (Gujarat Act No. 24 of 2003) and all other enabling powers in this behalf, the Gujarat Electricity Regulatory Commission had notified the Gujarat Electricity Regulatory Commission (Open Access in Intra-state Transmission and Distribution) Regulations, 2005, in the official gazette on 29.9.2005. Clause 14 of the said Regulations provides that the State Commission is to determine the transmission charge, wheeling charge and cross subsidy charge.

2. Since there was no formal petition from GETCO and concerned utilities in this regard, the Commission had thought it fit to initially determine these charges with available information by floating a discussion paper and inviting comments/suggestions of the stakeholders. A discussion paper on "Transmission Charge, Wheeling Charge and Cross Subsidy Charge" had been brought out by the Commission on 6.5.2005. This was placed on the website of the Commission and was also circulated to identified stakeholders for inviting their comments/ suggestions.

The Commission had separately asked all utilities to file their petitions for determining various charges like Transmission Charges, Wheeling Charges and Cross subsidy surcharge. However, with a view to facilitate open access and harnessing of the idle captive generation, as envisaged in the National Electricity Policy, such charges are proposed to be

determined for all the utilities operating in the state. These proposed charges are only for the interim period till final determination of such charges after receiving petitions from the licensees/ utilities.

### **3. Determination of Transmission Charges in Kind**

In the discussion paper, the Commission had proposed that Open access in the transmission system will be made available to the consumer on payment of charges of two types: (i) Transmission loss in Kind and (ii) Transmission charges in Cash. As far as the Transmission loss in Kind is concerned it was proposed that the energy injected into the Transmission system shall be reduced to the extent of technical loss applicable for the voltage level at the drawl point (receiving end). The Commission proposed to consider 4.40% loss level based on the average loss level of last three years submitted by the Gujarat Urja Vikas Nigam Limited (GUVNL).

However, in response to the proposal made in the discussion paper, several stakeholders have suggested that losses should be taken at each individual voltage level considering the point of injection and point of drawl.

Recently the ministry of Power has come out with Tariff Policy wherein approach to transmission loss allocation is proposed as under:

#### ***“7.2 Approach to transmission loss allocation***

*(1) Transactions should be charged on the basis of average losses arrived at after appropriately considering the distance and directional sensitivity, as applicable to relevant voltage level, on the transmission system. Based on the methodology laid down by the CERC in this regard for inter- state transmission, the Forum of Regulators may evolve a similar approach for intra-state transmission.*

*The loss framework should ensure that the loss compensation is reasonable and linked to applicable technical loss benchmarks. The benchmarks may be determined by the Appropriate Commission after considering advice of CEA.*

*It would be desirable to move to a system of loss compensation based on incremental losses as present deficiencies in transmission capacities are overcome through network expansion.*

*(2) The Appropriate Commission may require necessary studies to be conducted to establish the allowable level of system loss for the network configuration, and the capital expenditure required to augment the transmission system and reduce system losses. Since additional flows above a level of line loading leads to significantly higher losses, CTU/STU should ensure upgrading of transmission systems to avoid the situations of overloading. The Appropriate Commission should permit adequate capital investments in new assets for upgrading the transmission system.”*

The Central Electricity Regulatory Commission (CERC) has laid down methodology in this regard for inter-state transmission. The Forum of Regulators (FOR) and the appropriate Commission have been advised to examine and carry out study for the system loss. The issue regarding the examination and study of system loss will be done in due course. In the mean while considering the CERC's methodology for Inter-State Transmission and the transmission losses determined by the various other Commissions, the transmission losses, for the present are considered based on average loss levels of last three years.

Although the Commission would prefer to allocate the losses considering the distance /directional sensitivity and relevant voltage level, the Commission is constrained to apply average transmission loss for the present (irrespective of the voltage level of Transmission) at 4.40% till the system study and a policy approach on Intra state system decided by the

FOR or till it is revised by the Commission taking into account the petition of the GETCO.

#### **4 Transmission Charges in Cash**

In the discussion paper, recognizing the urgent need for deciding transmission charges, the Commission had, to begin with, considered the transmission cost for the year 2003-04 submitted by GEB in connection with Petition No. 292/2003 for aggregate revenue requirement, as the base.

Meanwhile, GETCO has submitted audited data for the annual transmission charges for 2003-04 as shown below:

#### **Annual transmission charges for the 2003-04**

Table no: 1

Figures in Lacs

Fixed Cost	2003-04 (Audited)
Employee cost	16462
Repairs & Maintenance	2442
Administrative & General	2999
Depreciation	22234
Interest on loans	20462
Interest on working capital	2138
Return on equity	26971
Total fixed cost	93707
Less expenses capitalized	1828
Total transmission charges	91879
Less other income	1536
<b>Net Annual Transmission Charges</b>	<b>90343</b>

Based on the above calculation of the fixed costs of GETCO and considering the loading of the Transmission System of 7587 MW in the

year 2003-04, the commission has considered the following Annual Transmission Charges and Transmission Rate per MW per day for open access users.

Loading at Transmission System MW	7587 MW
Net Annual Transmission Charges Rs in Lacs	90343 lacs
Proposed Transmission Charge	
For Long Term Open Access:	
$90343 \times 10^5 / (7587 \times 365)$	= 3262.36 Rs/MW/Day
For Short Term Open Access (ST-rate):	
$\frac{1}{4} \times \text{long term rate} = 3262.36 / 4$	= 815.59 Rs/MW/Day

The Commission accordingly specifies transmission charges as under:-

**Transmission Charges in cash**

- (i) Transmission Charges for long term open access user=  
3262.36 Rs/MW/Day.
- (ii) Transmission charges for short term open access:
  - (a) Up to 6 hours in a day in one block -  $1/4^{\text{th}}$  of ST-rate  
= Rs. 203.90 per MW,
  - (b) More than 6 hours and up to 12 hours in a day in one block -  
 $1/2$  of ST- rate = Rs.407.80 per MW,
  - (c) More than 12 hours and up to 24 hours in a day in one block -  
ST-rate = Rs. 815.59 per MW

The above Transmission charges can also be made applicable to such Open Access customers for use of State Transmission system in conjunction with inter-state transmission system. If ST customer while availing open access within the state also is utilizing ISTS, extra postage stamp would be levied.

## **5. Wheeling Charges in kind and cash**

The charges determined above are for the use of Transmission Licensees network. In case the open access user has also to utilise the distribution licensees network, for wheeling the power, then the charges shall be payable for use of distribution network

The Commission has asked all the distribution licensees operating in the State to file their proposal for determination of charges for use of its network. The Commission shall determine the charges against the proposal of the distribution licensees as and when filed. For the time being, the open access users shall pay charges determined by the Government of Gujarat in its policy for wheeling of power to group companies for use of distribution licensee's H.V. network.

## **6. Cross Subsidy Surcharge**

Section 42(2) of the Act provides for open access in distribution. The introduction of open access would be in phases and may be subject to conditions, including conditions in relation to cross subsidies. The relevant portion reads as follows:

*"42. (1) .....*

*(2) .....*

*Provided that such open access may be allowed before the cross subsidies are eliminated on payment of a surcharge in addition to the charges for wheeling as may be determined by the State Commission*

*Provided further that such surcharge shall be utilised to meet the requirements of current level of cross subsidy within the area of supply of the distribution licensee*

*Provided also that such surcharge and cross subsidies shall be progressively reduced and eliminated in the manner as may be specified by the State Commission*

*Provided also that such surcharge shall not be leviable in case open access is provided to a person who has established a captive generating plant for carrying the electricity to the destination of his own use.*

*....."*

The State Commission is required to specify Cross-subsidies.

In the year 2003-04, the average realisation received by the GEB from consumers connected at EHT level was Rs. 4.72 per unit against the cost of supply of Rs. 2.92.

Similarly, the average realisation received by the GEB from Railway Traction consumers was Rs. 5.10 per unit against the cost of supply of Rs. 3.24 per unit.

From the above, the current level of cross subsidy available to GEB from supply to EHT Consumers is Rs. 1.80 per kWh and Rs. 1.86 per kWh from Railway Traction.

The Commission has considered the provisions of the Electricity Act, 2003 and the various inputs received in response to the discussion paper. The Commission also kept in view need for introducing open access by phases and also the likely financial impact on the distribution licensees who have universal obligation under the Electricity Act, 2003.

In view of the above, the Commission has decided to determine the Cross Subsidy Charge, as payable by any consumers opting for open access, Rs. 1.80 per kWh.

## **7. Applicability of the Cross Subsidy Surcharge**

The Cross Subsidy Surcharge will be payable by a consumer availing open access to the Transmission / Distribution System as provided in Gujarat Electricity Regulatory Commission (Open Access in Intra-state Transmission and Distribution) Regulations, 2005, in addition to transmission charges and wheeling charges except by the valid sanction holders permitted to wheel power in accordance with notification issued under Section 28 of the Indian Electricity Act, 1910.

## **8. Charges for wheeling Power from Renewable Source of Energy**

In order to promote the generation and power purchase from Renewable Sources of energy, the Commission is of the view that,

- 1) In case the owner of such source of energy opt for wheeling power generated for its own use, the Gujarat Energy Transmission Company Limited shall transmit the power to the point of destination of use by charging 4 % of energy injected as all inclusive wheeling charges instead of the Transmission charges in cash and kind determined as above.
- 2) In case the owner of renewable sources of energy opts to sell the power to the distribution licensee, using GETCO's network, the GETCO shall be entitled to recover 4 % of the energy injected into the transmission network as an all inclusive charge.
- 3) In case the owner of renewable sources of energy opts to sell the power to third party, the GETCO shall be entitled to recover only four percentage of injected power for wheeling energy to the point of use. However, it will be subject to payment of Cross Subsidy Surcharge as determined above.

The charges decided by this order would be applicable from the date of issue of order and shall remain in force till revised.

Sd/-

**(Man Mohan)**  
**Member**

Sd/-

**(K.P. Gupta)**  
**Member**

Sd/-

**(G.Subba Rao)**  
**Chairman**